
Memecylon tirunelvelicum, a New Species of Melastomataceae from Peninsular India

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ABSTRACT. The new species *Memecylon tirunelvelicum* (Melastomataceae), collected from the Tirunelveli Hills of Tamil Nadu in Peninsular India, is described and illustrated. It is distinguished by the nerves on its leaves, a long and quadrangular peduncle, larger flowers with deeper calyx lobing but faint disc ray, and dense papillae on the ovary. It is closely related to *Memecylon grande* Retzius by its leaf shape and texture, terete branchlets, inflorescence position, and ovary shape.

Key words: India, Melastomataceae, *Memecylon*, Tamil Nadu, Tirunelveli Hills.

Memecylon is a paleotropical genus comprised of about 200 to 300 species (Bremer, 1987). Fifteen species are endemic to India, including the new species described here. Recent botanical explorations (1996–1999) to the Tirunelveli Hills at the southernmost end of the Western Ghats in the state of Tamil Nadu, India, yielded a taxon quite different from Indian species of *Memecylon* hitherto described. It is described here as a new species and is named after the type locality, namely Tirunelveli. This area is considered one of the biodiversity hot spots in India (Nayar, 1996).

Memecylon tirunelvelicum Murugan, Manickam & Sundaresan, sp. nov. TYPE: India. Tamil Nadu: Tirunelveli District, Kalakad Wild Life Sanctuary, Sengaltheri–Kulirati path, 900–1100 m, 27 Mar. 1998, *Manickam & Murugan 15299* (holotype, XCH; isotypes, MH, MO, XCH). Figure 1.

Haec species *M. grande* Retzius affinis, sed ab eo foliis parvis, pedunculo longo et quadrangulo (1.5–2.5 cm vice 1.0–1.5 cm), calyce profunde lobato, disci radiis indistinctis, ovario papillis densis ornato et ovulis paucioribus (6–9 vice 10–12) differt.

Shrub or *small tree*, to 4 m tall; branches and branchlets terete, glabrous, yellowish green when dry; bark thin, grayish brown, peeling off; internodes 3–9 cm long. *Leaves* opposite, elliptic to lanceolate, base cuneate or attenuate, apex acute to

obtusely acuminate, 3.5–9 × 1.3–3.5 cm, margin entire, coriaceous, glossy, glabrous, yellowish green when dry; lateral nerves conspicuous; petiole 5–7 mm, canaliculate above, glabrous. *Inflorescence* axillary branched cymes, up to 4 cm long; peduncles quadrangular, 1.5–2.5 cm long; pedicels 5 mm long, terete, glabrous; bracts lanceolate, 2–4 mm long, persistent. Flowers 1 cm diam., regular, bisexual; 4-merous epigynous. *Calyx* tubes campanulate, 3 mm long, densely papillose; lobes 4, suborbicular, 1.5 × 3 mm, pink, papillose without, glabrous within, scarious along margin. *Petals* 4, blue, ovate, 5 × 5 mm, base slightly clawed, broad in middle, obtusely acute at apex. *Disc rays* inconspicuous. *Stamens* 8, subequal, incurved in bud; filaments subulate, to 2 mm; anthers falcate 3 mm long, 2-loculed; glands terminal on anther lobes, oblong, 1.25 × 0.5 mm. *Ovary* subglobose, inferior, 3 mm across, densely papillose without, unilocular; ovules ca. 6 to 9, free-central placentae; styles linear-subulate, 3–5 mm, glabrous; stigmas acute, yellow. *Berries* globose, 1.2 × 1 cm, yellow; seeds 1 cm, testa crustaceous.

Distribution. Endemic to the Tirunelveli Hills; recorded so far from only three localities, namely, Sengaltheri, between the Naraikadu and Vistharamalai path and Manjoli in Western Ghats, Tamil Nadu, India.

Phenology. Flowering in March; fruiting June–September.

Ecology. The new species is found in the semi-evergreen forests between 900 and 1100 m, and is associated with *Clausena austroindica* B. C. Stone & K. K. N. Nair, *Mallotus aureo-punctatus* Mueller Argoviensis, *Syzygium gardneri* Thwaites, *Eugenia rottleriana* Wight & Arnott, *Mallotus muricatus* Beddome, *Ellertonia rheedii* Wight, *Chomelia asiatica* Kuntze, *Peristrophe montana* Nees, etc.

Etymology. The specific epithet refers to the type locality of this species.

Paratypes. INDIA. **Tamil Nadu:** Tirunelveli District, Naraikadu to Vistharamalai, 1000 m, 7 June 1998, *Man-*



Figure 1. *Memecylon tirunelvelicum* Murugan, Manickam & Sundaresan. —A. Fertile branch with axillary cymes. —B. Inflorescence bract. —C. Flower (upper view). —D. Petal. —E. Stamens. —F. Pistil with densely papillate calyx. —G. Calyx with pistil (upper view). —H. Ovary (longitudinal section). —I. Ovary (cross section) (XCH 15299). —J. Drupe (XCH 15997).

Manickam & Murugan 15997 (XCH); Manjoli, 1100 m, 4 Sep. 1998, Manickam & Murugan 17349 (XCH).

Memecylon tirunelvelicum is allied to *Memecylon grande* Retzius, but the new species differs by con-

spicuous nerves in the leaves, a long and quadrangular peduncle, large flowers with a deeply lobed calyx, a faint disc ray, and dense papillae on the ovary.

KEY TO THE SPECIES OF *MEMECYLON* IN THE TIRUNELVELI HILLS

- 1a. Leaves obtuse/cordate at base.
 2a. Inflorescence pedunculate cymes *M. subramanii* Henry
 2b. Inflorescence fascicled cymes.
 3a. Branchlets quadrangular.
 4a. Petals not clawed; leaf base cordate *M. wightianum* Triana
 4b. Petals clawed; leaf base obtuse *M. subcordatum* Cogniaux
 3b. Branchlets terete.
 5a. Disc rays faint; calyx tube campanulate; leaves ovate
 *M. malabaricum* (Clarke) Cogniaux
 5b. Disc rays prominent; calyx tube saucer-shaped; leaves lanceolate
 *M. depressum* Bentham ex Triana
- 1b. Leaves acute/cuneate at base.
 6a. Branchlets quadrangular/subangulate.
 7a. Flowers sessile; calyx tube saucer-shaped *M. lushingtonii* Gamble
 7b. Flowers pedicellate; calyx campanulate.
 8a. Peduncle > 3 mm long; 3-flowered umbel *M. gracile* Beddome
 8b. Peduncle < 3 mm long; many-flowered umbel.
 9a. Leaves elliptic-lanceolate; petals clawed; calyx saucer-shaped
 *M. angustifolium* Wight
 9b. Leaves elliptic-ovate; petals not clawed; calyx tube campanulate
 *M. umbellatum* Burman f.
- 6b. Branchlets terete.
 10a. Inflorescence terminal *M. manickamii* Murugan, Sundaresan & Jothi
 10b. Inflorescence lateral/axillary.
 11a. Flowers sessile in fascicles/tubercles.
 12a. Leaves lanceolate; leaf nerves and disc rays prominent
 *M. heyneanum* Bentham ex Wight & Arnott
 12b. Leaves ovate; leaf nerves and disc rays obscure *M. flavescens* Gamble
 11b. Flowers pedicellate in branched cymes.
 13a. Calyx tube saucer-shaped; petals emarginate at apex; leaf veins < 6 pairs
 *M. edule* Roxburgh
 13b. Calyx tube campanulate; petals acute at apex; leaf veins > 6 pairs.
 14a. Peduncles < 1.5 cm long; bracteoles oblong; ovary laxly papillose
 *M. grande* Retzius
 14b. Peduncles > 1.5 cm long; bracteoles lanceolate; ovary densely papillose
 *M. tirunelvelicum* Murugan, Manickam & Sundaresan

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